

## REMARKS

Claims 1-31 are in this case. No claim is amended in this submission.

### Amendment of the Specification

The specification has been amended at page 1 to update the status of one of the U.S. patent documents to which this application claims priority. This amendment does not add new matter to the specification.

### The Rejections

Claims 1-14 and 19-31 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-3, 10 and 21-34 of U.S. patent 6,355,093. The 6,355,093 patent and the instant application are commonly owned. Applicants respectfully traverse this rejection.

The Office Action states:

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the application and the '093 patent claim a membrane for use in a catalytic membrane reactor which comprises a mixed metal oxide having the stoichiometry:  $A_{2-x}La_xB_{2-y}Fe_yO_{5+z}$  wherein A is an alkaline earth metal ion or mixture of alkaline earth metal ions, B is a metal ion or mixture of metal ions where the metal is selected from the group consisting of 3d transition metals, or the group 13 metals, x and y, independently of one another are numbers equal to or greater than zero and less than 2 and z is a number that renders the compound neutral. The membrane can also be made a mixed metal oxide having the stoichiometry of  $Sr_{2-x}La_xGa_{2-y}C_yO_{5+z}$ . The difference between the instant application and that of the '093 patent is that the catalytic membrane of the '093 patent has a specific there [sic] dimensional structure the 3-d structure has not be [sic] specifically claimed in the instant application and to modify the catalyst membrane to include an oxidation and reduction zone, an adherent catalyst layer and three-dimension catalyst would have been obvious as the membrane of the instant application is broad enough to encompass the structure as claimed in the '093 application and thus would have been an obvious modification based on the type of application and type of reactor being used. The catalytic stoichiometry for the catalytic membrane are the [sic] essentially the same in both the application and the '093 patent and not patentably distinct.

This rejection appears to be based on a misunderstanding of the subject matter of the '093 claims. The Office Action alleges that the catalytic membrane of the '093 patent has a specific three dimensional structure. Claims 1-3, 10 and 21-34 of the '093 patent are all directed to a catalytic membrane reactor which comprises: (1) an oxidation zone, (2) a reduction zone, (3) a gas-impermeable membrane having an oxidation surface and a reduction surface, (4) an adherent catalyst layer on the oxidation surface and (5) a three-dimensional catalyst in the oxidation zone.

Claims 1-14 and 19-31 of the present application are directed to solid state membranes having particular stoichiometry. The claims of the instant application differ from those of the '093 patent in that the claims of the patent contain additional elements not claimed in claims of the instant application. The instant application does not claim a three-dimensional catalyst in the oxidation zone of a reactor. The three-dimensional catalyst of the claims of the '093 patent is a separate element from the gas-impermeable membrane. This is shown, for example, in Figs. 2, 3A and particularly in Fig. 3B of the '093 patent. Element 5 is the three dimensional catalyst and element 2 is the membrane. The three dimensional catalyst of the '093 patent is distinct from an adherent catalyst which is coated or layered on the membrane surface. To the extent that this rejection is based on a misunderstanding of the claims of the cited patent, it should be withdrawn.

In considering obviousness-type double patenting only the claims of the cited patent and not the specification of the cited patent can be considered. Thus, Applicants' claims must be shown to be obvious over the claims of the '093 patent. There is nothing cited on the record herein that indicates that it would have been obvious to have employed the membrane of the claims of the '093 patent in the absence of the additional element of those claims, i.e., the three-dimensional catalyst.

In view of the forgoing, this rejection should be withdrawn.

Claims 1-31 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-3, 10 and 21-34 of U.S. patent 6,033,632. U.S. patent 6,033,632 and the instant application are commonly owned. Applicants

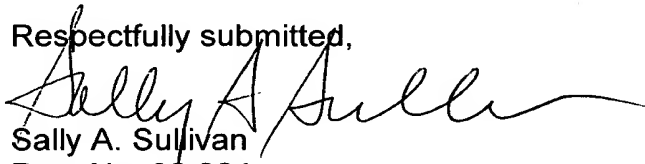
submit herewith a terminal disclaimer executed by the undersigned attorney of record which is believed to satisfy the requirements of 37 C.F.R. 1.321. The submission of this terminal disclaimer is believed to obviate the rejection.

Conclusion

It is believed that this submission overcomes the rejections of all of the pending claims and passage to issuance is respectfully requested.

It is believed this submission does not require the payment of a fee. If this is incorrect, please charge the appropriate fee to deposit account 07-1969.

Respectfully submitted,



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